

**In the Specification:**

Please add at page 8, between lines 2 and 3, the new paragraph as follows:

**A1** FIG. 12A is a flow chart depicting the addition of pixel attributes to sub-Blobs and  
Blobs representing part of the procedure of FIG. 12.

Please delete the paragraph beginning at page 8, line 18.

In the specification, please replace the paragraph beginning at page 32, line 5, as follows:

**A2** Preferably, the system keeps track of pixels belonging to a Blob and sub-Blob in order to perform a joint operation. Since there may be a large number of pixels belonging to a Blob and this type of operation may be done many times during a Blob's lifetime, it is preferred to avoid reassignment to every pixel of the Blobs involved. Towards this objective, a two-level linked list 236 can be used, as shown in FIG. 19. Every pixel will be assigned a pointer tag pSB, which will be an address to a SubBlob data structure. For a new incoming pixel with label  $x$ , comparisons with its neighbors (as illustrated in FIG. 17) will be performed. If one of its neighbors possesses the same label  $x$ , the address tag of the neighbor will be copied to the pixel. Otherwise, a new data item of SubBlob will be created and its address assigned to the pixel. In both cases, the SubBlob associated with the incoming pixel will be updated, which will in turn update its top-level Blob. Furthermore, the pixel clique will be examined to see if a joint operation is desirable. The joint operation with the data structure consists of traversal of links and pointer operations without the need of reassignment of all the pixels involved. Possible pseudo-code 238 for the joint operation is sketched in FIG. 20.